

23. The method according to claim 22, wherein the first electrical entity comprises current, voltage or conductivity and the response being recorded comprises current or voltage.

24. The method according to claim 21, wherein said second electrical entity comprises current, voltage, or current or voltage curves, and timing between pulses.

25. The method according to claim 21, wherein the pulses are superimposed on rising or falling current or voltage curves.

26. The method according to claim 21, wherein a plurality of measuring electrodes are used.

27. The method according to claim 26, wherein a plurality of measuring electrodes are formed of or coated by different materials.

28. The method according to claim 21, wherein a plurality of measuring electrodes are used, and at least some of said electrodes electrochemically influence others of said measuring electrodes.

29. The method according to claim 21, wherein voltammetric, potentiometric or conductometric measurements are made using two or three electrodes.

30. The method according to claim 21, and including the steps of cyclically switching a current or voltage generator and/or a recording device between different measuring electrodes allowing sufficient time between pulses to each electrode to allow the influence of a previous pulse on the liquid to have ceased before a next pulse arrives at the same electrode.

31. The method according to claim 21, wherein said pulses are varied in frequency.

32. The method according to claim 21, wherein said pulses are varied in amplitude.

33. The method according to claim 21, including the step of treating the transients to enhance measurements before said evaluation.

34. The method according to claim 33, wherein said transients are treated by derivation, integration or proportionality methods.

35. The method according to claim 21, wherein said electrical pulses have a pulse frequency of 10Hz to 100kHz.

36. The method according to claim 24, wherein at least one of said electrical entities is varied to provide a two dimensional response pattern.

37. An electronic tongue, comprising a pulse generator coupled to electrodes for contact with a substance to be investigated, a recording device for recording transients obtained by the application of pulses to said electrodes, and a computer for evaluating the transients using multivariate pattern recognition as claimed in claim 21.

38. An electronic tongue, as claimed in claim 37, wherein the computer is adapted to control the pulses based on size, shape or frequency, or based on an interaction between a pulse generated and a measured response.

IN THE ABSTRACT:

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